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A NEW METHOD OF CHECKING BLEEDING AFTER TONSILLOTOMY.

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Reprinted from the MEDICAL RECORD, *December* 17, 1892.

A YEAR or so ago I read a paper, written by Professor Delavan, of this city, upon the subject of tonsillar hemorrhage. In this article he has collected and discusses a very considerable number of expedients for governing the bleeding in this complication.

I was surprised not to find mentioned therein a method which I have taught my classes in operative surgery for several years past, and which seems unquestionably prompt, efficient, and easy of application; and is, furthermore, in my judgment, practically the best and wisest of the mechanical plans with which I am acquainted.

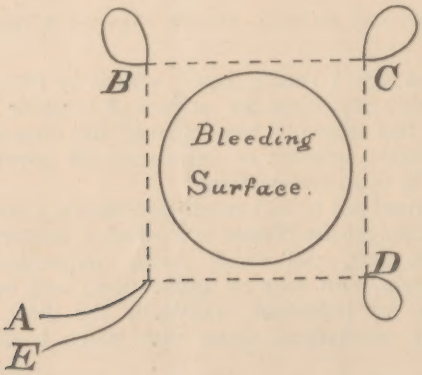
Although the expedient—which is presently to be explained, with a diagram—was of my own devising, yet it seems so self-evidently the thing to do that I took for granted the assumption that others must also have thought of the method and published it long ago.

Since reading Professor Delavan's paper, however, I have made some inquiries, and not finding the plan mentioned in any book at hand, Dr. Otto J. Müller, of 206 East 104th Street, this city, has recently obliged me by spending a day in the Academy of Medicine Library,

looking up this question in English, German, and French literature. He states that he finds no mention of the plan which I am about to detail.

Briefly, it consists in surrounding the bleeding surface with a stout purse-string ligature, of silk or catgut, which when tightened is entirely hidden in the tissues about the tonsillar stump.

The surgeon selects a large needle, preferably semi-circular in shape, and a needle-holder. The mouth is held open by a cork between the back teeth. Four stitches are now introduced, as per diagram. Less than two minutes is needed for this.



When the free ends, *A* and *E*, are drawn upon, the loops *B*, *C*, *D* of course disappear. The ligature is now tied tightly enough to stop bleeding, and the ends cut moderately short. The thread may either be left to slough out, or, and probably preferably, may be cut and removed in twenty-four to thirty-six hours.

As to the distance to which the needle penetrates, the two transverse strokes may enter to about one-quarter inch in depth. The two vertical ones, running parallel with the carotids, could, if desired, probably be passed

with safety rather more deeply; though there would seem to be no special advantage in this.

It is not necessary to include the pillars of the fauces in the grasp of the thread. The two vertically placed stitches run, of course, very near the pillars, but not really in their substance.

Regarding the source of hemorrhage after tonsillotomy, of one thing we can be certain, namely, that it never comes from either of the carotids. The external and internal carotids are very nearly equidistant from the tonsil, and behind it; the nearer, the internal, being rather more than half an inch away (1.5 ctm.); the external being, say, three-quarters of an inch (2 ctm.). If a tonsillotome be used, cutting either of these vessels is a mechanical impossibility.

At least six arteries supply the tonsil; all being branches, indirectly, of the external carotid. Of these the largest, as a rule, are from the ascending pharyngeal, and the ascending palatine.

Fatal bleeding from tonsillotomy is practically unknown. But bleeding to the verge of syncope, long continued, and severe enough to alarm most seriously the relatives and friends, if not the doctor—this is not so rare by any means. In such cases (in addition to nearly a dozen lesser mechanical devices) even ligation of one or another of the carotids has been advised, and actually practised; although of these vessels, tying the external carotid alone would seem rational; and that, too, only at a point between its first two branches—the superior laryngeal and the ascending pharyngeal.

However, with such a certain, safe, and easy device at hand as that which has herein been described, so severe a measure as cutting down and ligating a carotid can never be needed. Indeed, it would seem wisest to use the buried tonsillar ligature without waiting and wasting time and blood while trying less sure plans.

The nearest approach to this idea which the writer has anywhere found is a method suggested by Dr. E. W.

Clark, of New York, who has run two large needles through the bleeding base, and leaving these in place, wrapped a ligature firmly around them. Manifestly, even if this were equally as certain in effect, it would be quite as difficult to do as the writer's device, and must be much more annoying to the patient while in position. Indeed, the side of the tongue would be likely to be lacerated against the sharp needle-ends unless in some way these were covered.

The suggestion has also been made to seize with a volsellum forceps the bleeding surface, and drawing firmly upon it, tie a ligature about it. I have in one instance tried this, and found the ligature repeatedly slipping off in spite of my best efforts. Indeed, as there is nothing like a stump or pedicle left (if the tonsillotomy has been properly performed), such slipping is almost unavoidable.

I only mention this latter plan as being the other of the two which remotely resemble the method upon which this paper has been written.

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